

**BLACKTOP CARRIAGEWAY CONSTRUCTION**

SURFACE COURSE	50mm HRA 30/14 F SURF
BINDER COURSE	70mm HRA 60/32 BIN/BASE
BASE (ROADBASE)	170mm HRA 60/32 BIN/BASE (TO BE LAID IN TWO LAYERS)
SUB-BASE	SEE TABLE 1

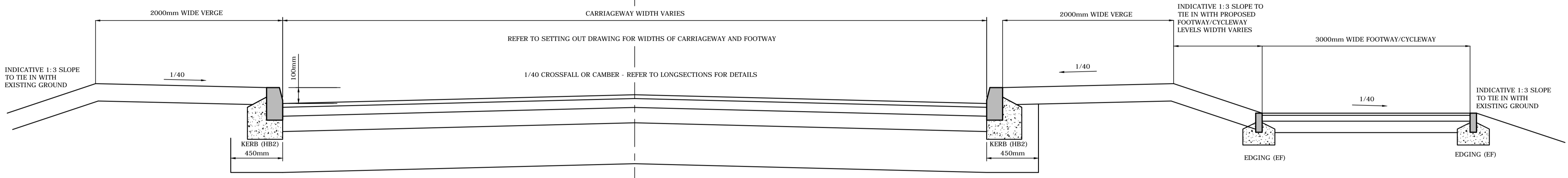
**IMPROVEMENTS WHERE CBR IS < 2.5%**

1. THE UNSUITABLE MATERIAL CAN BE REMOVED AND REPLACED WITH A MORE SUITABLE MATERIAL (I.E. CAPPING MATERIAL). IF THE DEPTH IS SMALL IT CAN BE REPLACED IN ITS ENTIRETY ALTHOUGH IT MAY ONLY BE NECESSARY TO REPLACE THE TOP LAYER. TYPICALLY 0.5M TO 1.0M OF MATERIAL REMOVED. THE DESIGN CBR SHOULD BE ASSUMED TO BE 2.5% TO ALLOW FOR THE EFFECTS OF ANY SOFTER MATERIAL UNDERNEATH.
2. IF THE SOIL IS COHESIVE A LIME (OR SIMILAR) TREATMENT MAY BE APPROPRIATE. THE NEW DESIGN CBR SHOULD BE ASSUMED TO BE 2.5%.
3. A GEOSYNTHETIC MATERIAL MAY BE ADDED INTO THE FOUNDATION DESIGN. THIS WILL NEED TO BE DESIGNED IN CONJUNCTION WITH THE MATERIAL SUPPLIER.
4. IF THE SOIL IS REASONABLY PERMEABLE THEN A DEEPER THAN NORMAL DRAINAGE SYSTEM MAY BE CONSIDERED TO DRAIN THE SOIL AND INCREASE THE CBR. HOWEVER, THIS WILL TAKE A CERTAIN PERIOD TO WORK EFFECTIVELY AS THE SOIL NEED TO DRAIN BEFORE CONSTRUCTION WORKS BEGIN ON THE PAVEMENT.

TABLE 1: FOUNDATION THICKNESS OPTIONS (FOUNDATION CLASS 2)

Option 1 Sub-base MCHW cl 803, 804 (<5ms a), 805, 806	Capping MCHW1 Series 600	Option 2	
		Sub-base MCHW cl 803, 804 (<5ms a), 805, 806	+
2.5	450	250	350
3	430	240	320
4	370	230	270
5	330	220	240
6	310	210	230
7	290	200	220
8	280	190	200
10	250	180	180
12	230	170	170
15	200	150	150
20	200	150	150

**PAVEMENT CONSTRUCTION TYPE 1 (DMRB DESIGN)  
(SCALE 1:20)**



**BLACKTOP CARRIAGEWAY CONSTRUCTION FOR LOCAL DISTRIBUTOR ROAD**

SURFACE COURSE	50mm HRA	50mm HRA
BINDER COURSE	70mm HRA	OR 70mm HRA
BASE (ROADBASE)	150mm HRA	170mm DBM
SUB-BASE	SEE TABLE 2	SEE TABLE 2

**FILL MATERIAL BELOW ADOPTABLE HIGHWAYS**

ALL FILL MATERIAL BELOW ADOPTABLE HIGHWAYS TO BE CLASS 1A, 1B, 1C, 6F1 OR 6F2 OF THE D.T.P. SPECIFICATION FOR HIGHWAY WORKS THE CONTRACTOR SHALL SUPPLY CERTIFICATES OF CONFORMITY TO THE HIGHWAY AUTHORITY. ALL MATERIAL TO BE PLACED AND COMPACTED IN ACCORDANCE WITH THE HIGHWAYS AGENCY SPECIFICATION FOR HIGHWAY WORKS. THE CONTRACTOR SHALL ARRANGE FOR INDEPENDANT TESTING OF THE LEVELS OF COMPACTION (TO BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS). TEST RESULTS SHOWING CONFORMITY SHALL BE SUPPLIED TO THE HIGHWAY AUTHORITY. THE CONTRACTOR SHALL OBTAIN THE APPROVAL OF THE HIGHWAY AUTHORITY FOR THE FILL MATERIAL, LAYER THICKNESS AND METHOD OF COMPACTION.

**BLACKTOP FOOTWAY CONSTRUCTION**

SURFACE COURSE	20mm THICK AC6 DENSE SURF 100/150 ASPHALT CONCRETE TO BS EN 13108
BINDER COURSE	50mm THICK AC20 DENSE BIN 100/150 ASPHALT CONCRETE TO BS EN 13108
SUB-BASE	100mm THICK TYPE 1 GRANULAR MATERIAL TO H.A. SPECIFICATION FOR HIGHWAY WORKS CLAUSE 803.

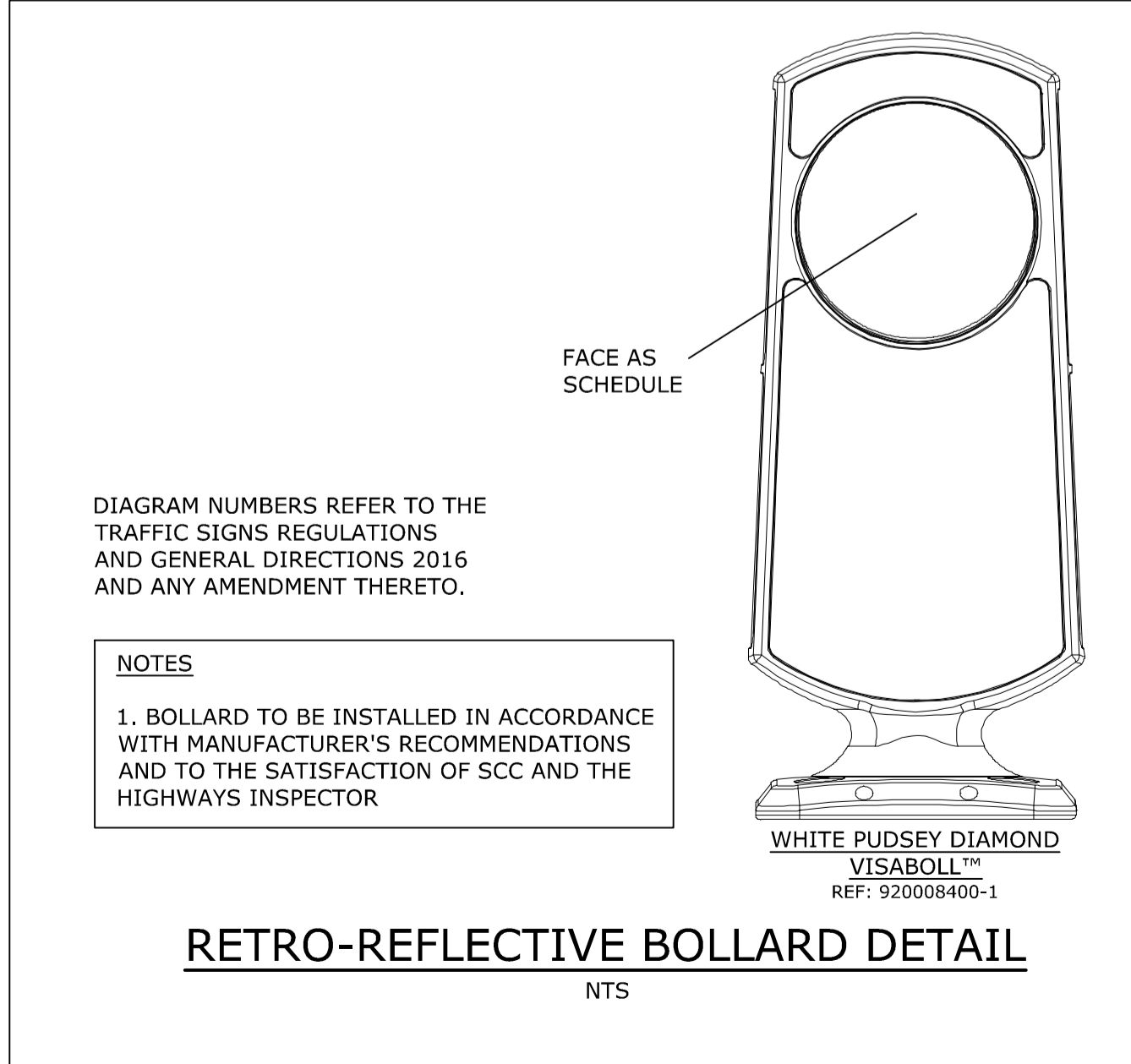
TABLE 2: DEPTH OF SUB-BASE FOR CBR VALUES - PAVEMENT TYPE 2 AS PER TABLE 9.2 OF THE SUFFOLK COUNTY COUNCIL SPECIFICATION FOR ESTATE ROADS, MAY 2007

CBR	SUB-BASE THICKNESS
>5%	225mm
4%	300mm
3%	380mm
2%	500mm

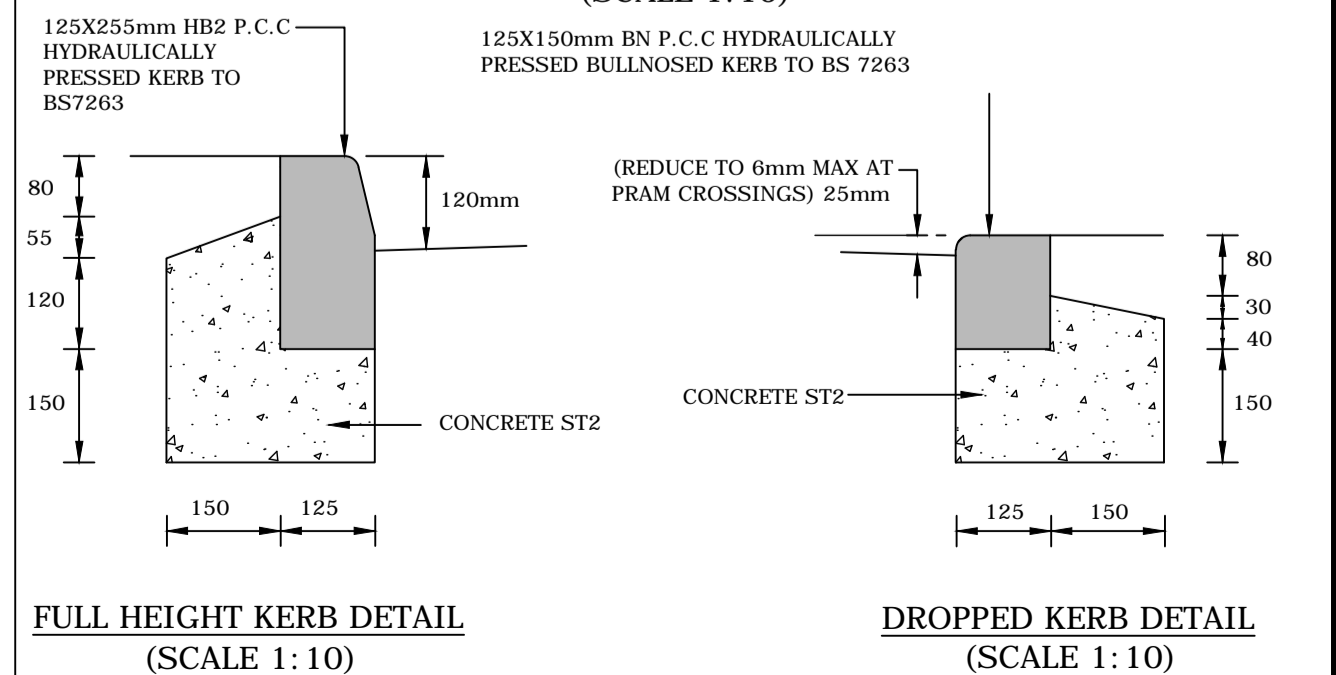
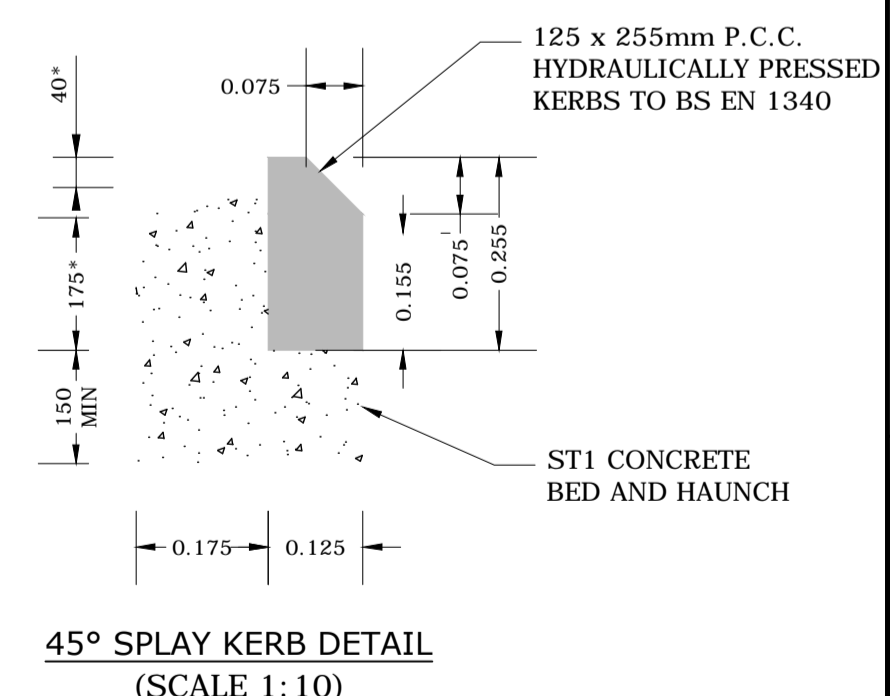
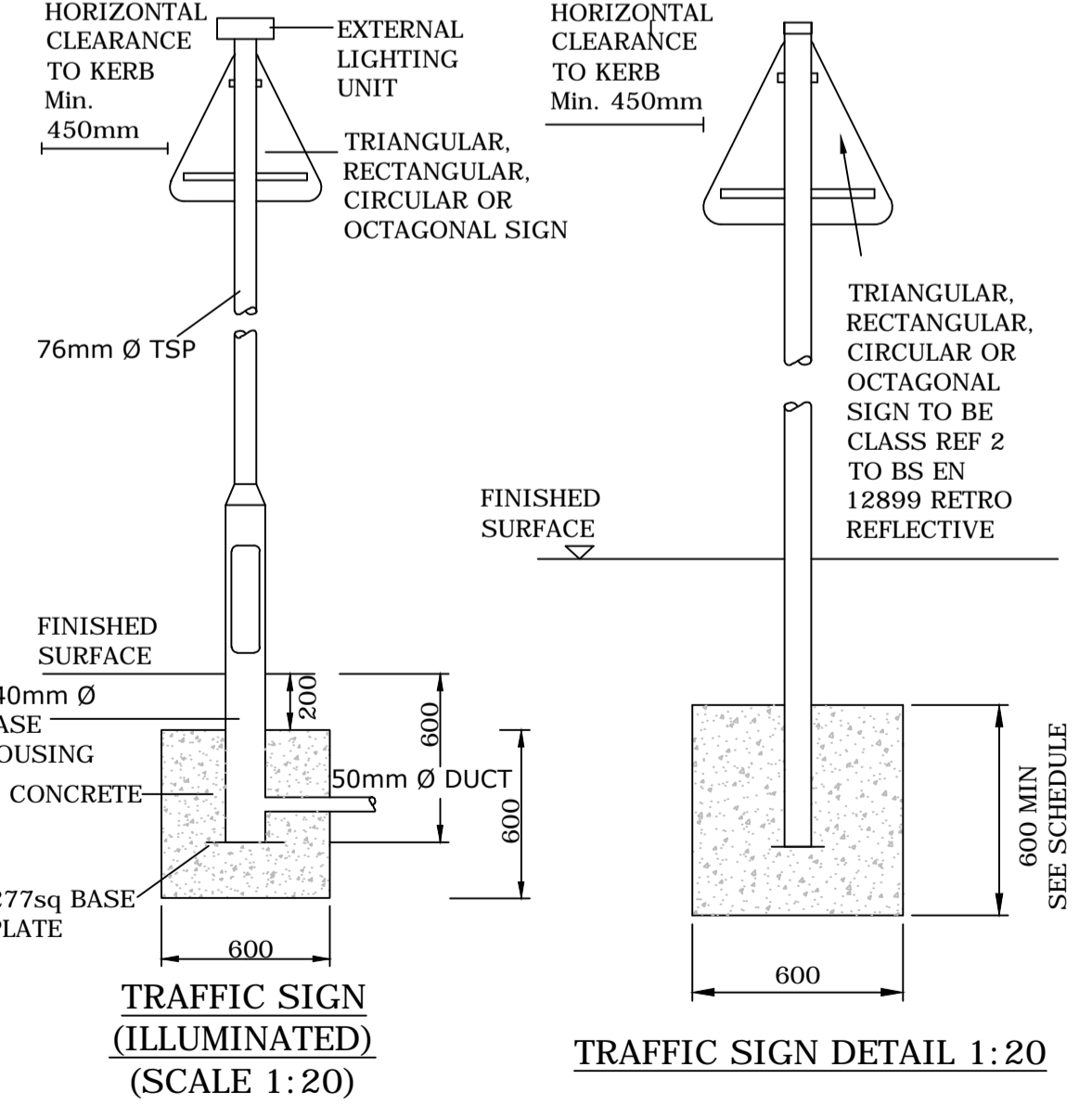
WHERE CBR < 2% ADDITIONAL MEASURES MAY BE REQUIRED.

\* NOTE: 1. IF SUB-GRADE IS FROST SUSCEPTIBLE ROAD CONSTRUCTION MUST BE AT LEAST 450mm THICK. ANY VARIATION IN GROUND CONDITIONS TO BE REFERRED TO THE SITE ENGINEER.

**PAVEMENT CONSTRUCTION TYPE 2  
TO BE CONSTRUCTED IN ACCORDANCE WITH ESTATE ROAD GUIDANCE FOR A LOCAL DISTRIBUTOR ROAD  
(SCALE 1:20)**



NOTE:  
LIT SIGNS TO BE 3w LED BY SIMMONSIGNS OR OTHER APPROVED. SECONDARY ISOLATOR TO BE L51.2,3,4 RANGE BY CHARLES ENDIRECT



- NOTES
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SPECIALISTS DRAWINGS AND THE SPECIFICATION.
  2. DO NOT SCALE FROM THIS DRAWING MANUALLY OR ELECTRONICALLY. WRITTEN PERMISSION MUST BE OBTAINED FROM MLM PRIOR TO SCALING ELECTRONICALLY OR USING THIS ELECTRONIC FILE.
  3. WHERE CBR < 2.5% IT IS CONSIDERED UNSUITABLE SUPPORT FOR A PAVEMENT FOUNDATION AND MUST BE PERMANENTLY IMPROVED. SEE IMPROVEMENTS BOX BELOW.
  4. RESTRICTED FOUNDATION DESIGN IS INTENDED FOR USE WHERE IT IS INAPPROPRIATE TO CARRY OUT THE RANGE OF COMPLIANCE TESTING REQUIRED FOR PERFORMANCE RELATED SPECIFICATION FOR FOUNDATIONS (PRSF).
  5. WHERE BOUND SUB-BASE MIXTURES ARE PERMITTED IN RESTRICTED FOUNDATION DESIGN THEY ARE RESTRICTED TO THOSE USING CEM1 AS THE PRIMARY BINDER.
  6. CAPPING MATERIAL MAY COMPRISE 6F1, 6F2, 6F3, 6F4, 6F5 & 6S - ALL TO SPECIFICATION SERIES 600 OF THE MCHW.

**CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015**

**DESIGNERS HAZARD INFORMATION FOR CONSTRUCTION**

1. IF YOU DO NOT FULLY UNDERSTAND THE RISKS INVOLVED DURING THE CONSTRUCTION OF THE ITEMS INDICATED ON THIS DRAWING ASK YOUR MANAGER, HEALTH & SAFETY ADVISOR OR A MEMBER OF THE DESIGN TEAM BEFORE PROCEEDING.
  2. WORKS ADJACENT TO LIVE PUBLIC HIGHWAY.
  3. DEEP EXCAVATIONS.
  4. WORKING NEAR OPEN WATER.
  5. EXISTING SERVICES.
  6. DEEP DRAINAGE.
- THE ABOVE NOTES REFER SPECIFICALLY TO THE INFORMATION SHOWN ON THIS DRAWING.  
REFER TO THE HEALTH AND SAFETY PLAN FOR FURTHER INFORMATION.

TO2	21.02.20	PUDSEY VISABOL ADDED	TM	JRC	JRC
TO1	06.09.2019	STATUS AMENDED	DS	DK	DK
PO1	13.02.2018	FIRST ISSUE	LB	DK	DK
REV	DATE	REVISION	MADE	CHK	APP

**TENDER**

SUITABILITY DESCRIPTION  
SUITABLE FOR INFORMATION

Connect 38,  
1 Dover Place, Ashford,  
Kent, TN23 1FB  
Tel: 01233 610530  
Website: www.mlmgroupp.com

**NORTHWEST HAVERHILL RELIEF ROAD**

**HIGHWAY CONSTRUCTION DETAILS**

DRAWN/DESIGN	LB	MLM REF	STATUS	REVISION
SCALE	1:500 @A1	619132	S2	TO2
PROJECT	ORIGINATOR	VOLUME/ LEVELS & LOCATIONS	TYPE	ROLE
619132-MLM-ZZ-XX-DR-C-0075				NUMBER